

Appl. No. 10/666,348  
Response Dated 06/20/2005  
Reply to Office Action of April 22, 2005

### **REMARKS**

This case has been carefully considered in light of the final Office Action dated April 22, 2005. Claims 1-37 remain pending in this application. Of these, claims 9-19 and 26-37 are withdrawn and claims 1-8 and 20-25 are rejected. No new matter has been added. Reconsideration in view of the following remarks is respectfully requested.

#### **Rejection under 35 U.S.C. §102**

Claims 1 - 4, 6, 8, 20 - 23 and 25 are rejected under 35 USC 102(b) as being anticipated by US patent no. 5,512,083 issued to Dunne et al. (hereinafter "Dunne"). Applicants respectfully traverse this rejection.

The subject Office Action states that Dunne discloses a process and apparatus for dehumidification comprising a plurality of heat transfer plates, each of said heat transfer plates being disposed radially with respect to a magnetic core axis and a plurality of magnetic core sections disposed between respective pairs of said heat transfer plates and shaped to form a cylindrical core assembly. In the rejection, the Examiner equates Applicants' heat transfer plates with element 120 of Dunne and refers to Figure 1A as well as col. 8, lines 66-67 and col. 15 lines 9-12 to reject the remaining elements of the claim. In particular, Figure 1A and col. 8, lines 66-67 illustrate the structure of a rotating adsorbent wheel 100 having axially parallel apertures 100 and a corrugated metal sheet used to form the wheel structure. Additionally, col. 15 lines 9-12 is a claim indicating that the substrate surface of the adsorbent wheel is selected from the group consisting of ceramic, glass, plastic, aluminum, steel, aluminized steel, and mixtures thereof.

Notwithstanding Examiner's written analysis of Dunne, it remains unclear to a sufficient level of detail *how* or *why* the Examiner believes the disclosed adsorbent wheel structure of Dunne anticipates the elements of Applicants' claim 1. In particular, Applicants have searched the text of Dunne and cannot find the terms "magnet" or "magnetic" used in any context therein. As such, Applicants' are left to assume that the rejection is merely based upon the fact that Dunne describes the use of a metal in the adsorbent wheel. Applicants further are left to infer that the Examiner in turn, is equating the presence of a metal (which could be magnetic) to a

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**"magnetic core"** as recited in claim 1. Applicants respectfully disagree with this characterization for at least the following reasons.

Firstly, Applicants submit that claim 1 relates to an apparatus for **induction heating**, whereas Dunne is directed to an apparatus for dehumidification and odor removal. Applicants submit that the **"magnetic core"** as claimed by Applicants differs substantially in form and substance from the wheel structure of Dunne. To this end, Dunne does not disclose or suggest how the disclosed adsorbent wheel structure addresses or could otherwise be modified to address issues associated with electrical conductivity, power loss, eddy currents, etc., which are advantageously addressed in Applicants' specification.

Although Merriam-Webster's Online Dictionary indicates that the term **"magnetic"** *by itself and out of context* could be defined to mean "of or relating to a magnet or to magnetism" or "magnetized or capable of being magnetized", Applicants submit that the claimed term **"magnetic core"** has particular meaning as it relates to the field of induction and induction heating - a field, Applicants contend, is not addressed nor even contemplated in Dunne. In particular, a cursory Internet search using the GOOGLE™ search engine for the terms **"magnetic core"** and **"induction"** results in nearly 7,500 references. One such reference comes from the Wikipedia encyclopedia where a **"magnetic core"** is said to be a "...core of an electromagnet or inductor." The entry further describes that **properties of an electromagnet or inductor will be influenced by the core** and important factors are (1) the geometry of the magnetic core, (2) **the amount of air gap in the magnetic circuit**, (3) **the magnetic core material (especially permeability and hysteresis)**, and (4) the temperature of the core. (emphasis added).

Applicants further submit that Dunne does not perform the same functions or achieve the same results as is performed and achieved by Applicants' claimed invention. That is, Dunne cannot be said to reduce the presence of eddy currents within the magnetic core, which act to increase power loss through heat generation and lower the efficiency of an inductor. In fact, Applicants submit that the parallel apertures 100 (e.g. air gaps) of Dunne's adsorbent wheel would act to adversely influence inductive properties if incorporated within a true **"magnetic core"**.

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Thus, for at least the reasons set forth above, Applicants' submit that claims 1 and 20 are not anticipated by Dunne. Since claims 2-4, 6, 8, 21-23 and 25 depend directly or indirectly from claims 1 and 20, Applicants submit claims 2-4, 6, 8, 21-23 and 25 are similarly not anticipated by Dunne et al. for at least the reasons set forth above. Accordingly, withdrawal of the rejections under 35 USC 102(b) of claims 1 - 4, 6, 8, 20 - 23 and 25 as being anticipated by Dunne et al. is respectfully solicited.

Rejection under 35 U.S.C. §103

Claims 5, 7 and 24 are rejected under 35 USC 103(a) as being unpatentable over Dunne et al. in view of US patent no. 5,941,302 issued to Hattori et al. (hereinafter "Hattori").

Applicants submit that each of the independent claims 1 and 20 are allowable over Dunne for at least the reasons discussed above with reference to the rejection under 35 USC §102. Specifically, Applicants' claims 1 and 20 recite a magnetic core axis and a plurality of magnetic core sections, which are not taught by Dunne. Applicants respectfully submit that Hattori does not overcome the above noted deficiency of Dunne. As such, Applicants submit that the combination of Hattori and Dunne fail to teach, suggest, or disclose all elements of at least independent claims 1 and 20.

Each of the rejected dependent claims 5, 7, 24 depend from an independent claim which the Applicants believe to be in condition for allowance for at least the reasons discussed above. More specifically, claims 5 and 7 depend directly from claim 1, and claim 24 depends directly from claim 20. Applicants respectfully submit that claims 1 and 20 are patentably distinct from the applied references and that claims 5, 7 and 24 are similarly allowable based at least upon on their dependency. It is respectfully requested that the rejections be withdrawn.

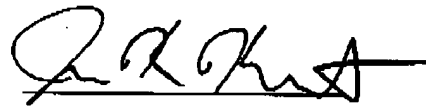
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**CONCLUSION**

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



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